

W. H. Stafford,

Door Spring.

No. 109,962,

Patented Dec. 6. 1870.

Fig: 1

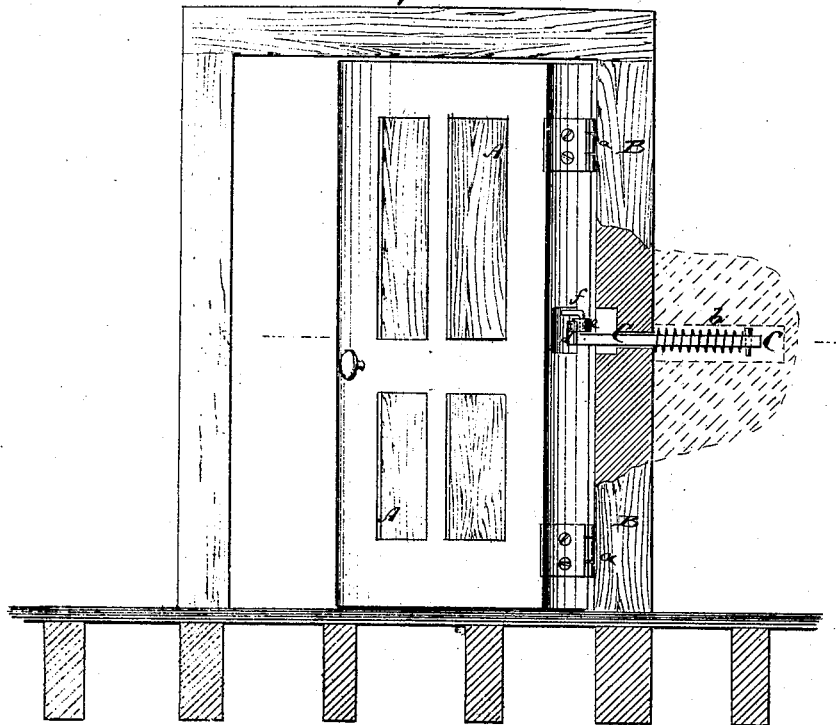
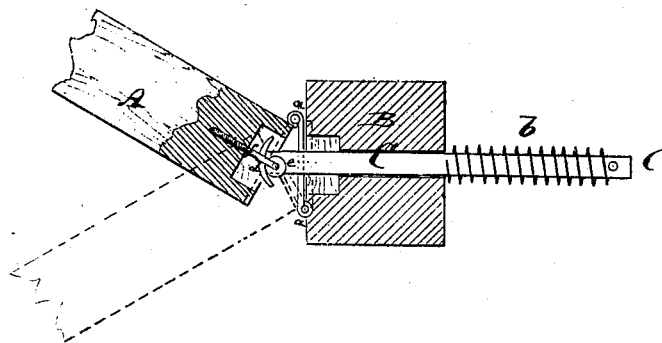


Fig: 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN DOOR-SPRINGS.

Specification forming part of Letters Patent No. **109,962**, dated December 6, 1870.

*To all whom it may concern:*

Be it known that I, WILLIAM H. STAFFORD, of the city of New York, in the county and State of New York, have invented a new and Improved Door-Spring; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 represents a side view, partly in section, of a door provided with my improved spring. Fig. 2 is a horizontal section, on an enlarged scale, of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new spring of very simple construction for holding doors shut, and is applicable to all kinds of doors, whether they are hinged to swing to one or both sides.

The invention consists in the use of a sliding rod and spring, the rod carrying a concave plate against which a roller carried by the door is fitted. The spring tends to draw said roller in line with the sliding rod, and to thereby hold the door shut.

A in the drawings represents a door of suitable construction.

B is the door frame or jamb.

a a are the hinges which connect the door to the frame. These hinges have either double

or treble leaves for the purpose of allowing the door to swing to one or two sides.

Through the jamb B is fitted a horizontal sliding rod, C, which is in line with the door when shut. A spring, b, of suitable construction, or a weight, tends to draw said slide away from the door.

To the inner end of the slide C is secured a curved plate, d, as shown in Fig. 2. Against the concave face of this plate fits a friction-roller, e, which is hung in an arm, f, that projects from the edge of the door. The spring b, drawing the plate d against the roller e, tends to bring the arm f in line with the rod C, and to thereby hold the door shut. While the door swings open, the roller moves along the curved surface of the plate d.

It is evident that the roller may be on the slide and the concave plate on the door without changing the effect of the device.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The horizontal sliding rod C, spiral spring b, curved plate d, and roller e, (hung in arm f, which projects over upon the inner end of plate d,) all combined and arranged to operate in the manner described.

WILLIAM H. STAFFORD.

Witnesses:

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